

CLAIMS

1. A transmission line terminating apparatus comprising a central processing unit responsible for supervisory control and communication control of the entire apparatus, a single packet processing IC connected to the central processing unit, and a plurality of printed circuit boards connected in a star-like configuration with the packet processing IC at the center thereof, wherein each of the plurality of printed circuit boards is connected to the packet processing IC by a high-speed supervisory control line having a sufficient transmission capacity to transfer therethrough transparent information and alarm transfer information as well as information from the central processing unit in packet form, and the transparent information and the alarm transfer information are communicated between the printed circuit boards via the high-speed supervisory control line and via the packet processing IC, with provisions made for the packet processing IC to detect a destination from packet information received from an originating printed circuit board and transmit the packet information to a terminating printed circuit board corresponding to the detected destination.

2. A transmission line terminating apparatus as claimed in claim 1, wherein the packet processing IC converts the information received from the originating printed circuit board into a packet with time priority assigned thereto, and forwards the packet to the terminating printed circuit board in accordance with the time priority.

3. A transmission line terminating apparatus as claimed in claim 1, wherein each of the printed circuit boards includes a destination printed circuit board information inserter for inserting a terminating printed circuit board address in the packet information, and the packet processing IC detects the terminating printed circuit board address contained in packet data received

from the originating printed circuit board and delivers the packet information, received from the originating printed circuit board, to the terminating printed circuit board identified by the detected address.

5 4. A transmission line terminating apparatus as claimed in claim 1, wherein the packet processing IC includes a link information setting unit for establishing a link between the originating printed circuit board and the terminating printed circuit board, and wherein the
10 information setting unit detects a link destination, contained in packet data received from the originating printed circuit board, to identify the terminating printed circuit board, and the packet processing IC forwards the packet information, received from the
15 originating printed circuit board, to the terminating printed circuit board identified as the link destination.

5 5. A transmission line terminating apparatus as claimed in claim 1, wherein data to be transmitted from the printed circuit board is transmitted in the form of a
20 packetized cell.

6. A transmission line terminating apparatus as claimed in claim 5, wherein the packetized cell is a packet cell selected from a group including, but not limited to, an ATM cell and an IP cell.